**Word Problems**

Mrs. Ganza is planning to build a new rectangular brick patio. She plans on using bricks that are 1 foot wide by 2 feet long. She would like the new patio to be 12 feet by 14 feet. She expects that no bricks will need to be cut.

**Part A**

Mrs. Ganza uses only whole 1-foot-by-2-foot bricks. State how many bricks should be used. Justify your answer.

**Part B**

Determine the total area and the perimeter of the new patio. Show all your work

six

The coordinate grid below shows Alice’s neighborhood. Point *A* represents Alice’s house. Her friends Barbara, Carlos, and Dana also live in the neighborhood.

***A***

**Part A**

Plot Point *A* on the grid in your answer booklet. Barbara’s house is at the point (1, 5). Plot

that point and label it Point *B*. Carlos’ house is at the point (1, 2). Plot that point and label

it Point *C*.

**Part B**

If Alice walks to Barbara’s house and the two girls then walk to Carlos’ house before

returning to Alice’s, which type of triangle is formed?

**Part C**

Point *D* represents Dana’s house. When the four houses are connected by line segments,

they form a trapezoid.

Find and label a Point *D* on the grid. Identify the coordinates of the point you labeled as

Point *D* and explain why quadrilateral *ABCD* is a trapezoid.

six

Jenny wrote the following expression in her notebook.

(–7) · (–7) · (–7) · (–7) · *y* · *y* + 3 · 3 · 5 · 5 · 5 · 5 · 5 · 5 · *x* · *x*

**Part A**

What is the value of the expression if *x* = 1 and *y* = 2? Show all your work.

**Part B**

Show how Jenny can correctly rewrite this expression using exponents. Explain why the

value of the expression can never be negative.

**Part C**

Rewrite the following expression as the product of 3 prime numbers with exponents.

625 ∙ 64 ∙ 243

six

The table below shows the number of points that each player on a basketball team scored in his last game.

**Points Scored**

|  |  |
| --- | --- |
| **Player** | **Number of Points Scored** |
| Alex | 9 |
| Doug | 12 |
| Nick | 15 |
| Keith | 5 |
| Sam | 4 |

What percentage of the total points did Alex score?